

September 18, 2015



U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 16212

EXPIRATION DATE: August 31, 2017

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Entegris, Inc.
Billerica, MA
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of certain adsorbed hazard gases without meeting segregation requirements when transported by vessel. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the transportation in commerce.
 - c. No party status will be granted to this special permit.
 - d. This special permit serves as an "exemption" under Section 7.9.1 of the IMDG Code (see IMO MSC/Circ. 1075-Granting Exemptions from the Provisions of the IMDG Code), and as a "Competent Authority Approval" as defined under 49 CFR § 107.1.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.302c(a) and Packing Instruction P208 of the IMDG Code in that cylinders authorized under DOT-SP 13220 are permitted and § 176.83(b) and Section 7.2.4 of the IMDG Code in that the segregation

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restriction of placing adsorbed gases that have the Division 2.1 (flammable gas) and Class 8 (corrosive) hazard is waived and the materials may be shipped in the same transport container.

5. BASIS: This special permit is based on the application of Entegris, Inc. dated July 10, 2014 submitted in accordance with § 107.105 and the public proceeding thereon.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description				
Proper Shipping Name	Hazard Class/ Division	Subsidiary Risk	Identification Number	Hazard Zone
Adsorbed gas, flammable, n.o.s.	2.1	N/A	UN3510	N/A
Adsorbed gas, toxic, flammable, n.o.s.	2.3	2.1	UN3514	A, B, C & D
Adsorbed gas, toxic, corrosive, n.o.s.	2.3	8	UN3516	A, B, C & D
Adsorbed gas, toxic, flammable, corrosive n.o.s.	2.3	2.1, 8	UN3517	A, B, C & D
Adsorbed gas, toxic, oxidizing, corrosive, n.o.s.	2.3	5.1, 8	UN3518	A, B, C & D
Ammonia Anhydrous*	2.3	8	UN1005	D
Arsine*	2.3	2.1	UN2188	A
Arsine, adsorbed	2.3	2.1	UN3522	A
Boron trichloride*	2.3	8	UN1741	C
Boron trifluoride, compressed*	2.3	8	UN1008	B

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Hazardous Materials Description				
Proper Shipping Name	Hazard Class/Division	Subsidiary Risk	Identification Number	Hazard Zone
Boron trifluoride, adsorbed	2.3	8	UN3519	B
Carbon monoxide, compressed*	2.3	2.1	UN1016	D
Compressed gas, flammable, n.o.s.*	2.1	N/A	UN1954	N/A
Chlorine*	2.3	5.1, 8	UN1017	B
Chlorine, adsorbed	2.3	5.1, 8	UN3520	B
Compressed gas, toxic, corrosive, n.o.s.*	2.3	8	UN3304	A, B, C & D
Dichlorosilane*	2.3	2.1, 8	UN2189	B
Germane*	2.3	2.1	UN2192	B
Germane, adsorbed	2.3	2.1	UN3523	B
Hydrogen bromide anhydrous*	2.3	8	UN1048	C
Hydrogen chloride anhydrous*	2.3	8	UN1050	B
Hydrogen selenide, adsorbed	2.3	2.1	UN3526	A
Hydrogen selenide anhydrous*	2.3	2.1	UN2202	A
Hydrogen sulfide*	2.3	2.1	UN1053	B
Methyl mercaptan*	2.3	2.1	UN1064	C
Liquefied gas, toxic, corrosive, n.o.s.*	2.3	8	UN3308	A, B, C & D

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Hazardous Materials Description				
Proper Shipping Name	Hazard Class/Division	Subsidiary Risk	Identification Number	Hazard Zone
Nitric oxide, compressed*	2.3	5.1, 8	UN1660	A
Phosphine*	2.3	2.1	UN2199	A
Phosphine, adsorbed	2.3	2.1	UN3525	A
Phosphorus pentafluoride, compressed*	2.3	8	UN2198	B
Phosphorus pentafluoride, adsorbed	2.3	8	UN3524	B
Silicon tetrafluoride, compressed*	2.3	8	UN1859	B
Silicon tetrafluoride, adsorbed	2.3	8	UN3521	B

*These proper shipping names may be used until January 1, 2016 and are only permitted for materials in an adsorbed state under the terms of this permit.

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Cylinders that comply with the specification in DOT-SP 13220 or § 173.302c.

b. OPERATIONAL CONTROLS - The segregation restrictions in § 176.83(b) and Section 7.2.4 of the IMDG Code are waived with regards to placing adsorbed gases that have a Division 2.1 (flammable gas) and Class 8 (corrosive) hazard provided the following operational controls are met:

(i) The capacity of the cylinders used under this special permit must not exceed 12 liters;

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(ii) The maximum pressure in cylinders must comply with the limits in DOT-SP 13220 for DOT-SP 13220 cylinders or § 173.302c(b) for UN pressure receptacles; and

(iii) The cylinders valves must be closed and then secured in the closed position using the following:

(1) Each valve outlet must be sealed by a threaded cap or treaded plug and inert gasketing material;

(2) Each valve must be secured using valve tie down straps; and

(3) Each valve with cap or plug and ties must be shrink wrapped (or similar covering).

8. SPECIAL PROVISIONS:

a. Under the terms of this special permit, the grantee may only offer hazardous materials (i.e., the grantee is not authorized as a carrier).

b. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modification or change is made to the package and it is reoffered for transportation in conformance with this special permit and the HMR.

c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle and cargo vessel.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel used to transport packages covered by this special permit.

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11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—"The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 Immediate notice of certain hazardous materials incidents, and 171.16 Detailed hazardous materials

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incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Dr. Magdy El-Sibaie

Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: Tarr